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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,195	10/28/2005	Detlef Baranski	021500-135	7014

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EXAMINER

KARACSONY, ROBERT

ART UNIT	PAPER NUMBER
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2821

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/528,195	Applicant(s) BARANSKI, DETLEF	
	Examiner ROBERT KARACSONY	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 13-15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Walton et al.* (US 5,355,144, hereinafter *Walton*) in view of *Ishikawa et al.* (US 6,239,757, hereinafter *Ishikawa*).

Claim 1: *Walton* teaches an antenna pane comprising:

at least one glass pane (100, fig. 10) and at least one electrically conductive coating (105, fig. 10), which further comprises a slot (104, fig. 10) antenna to transmit/receive electromagnetic waves.

Walton fails to teach the coating is subdivided by barrier lines into a number of electrically isolated segments on which the coating incorporates at least one strip-like segmented surface portion in which the distance between the barrier lines is so small that the coating there can transmit HF radiation in a specified frequency range, wherein the segmented surface portion is constructed as a slot antenna for electromagnetic radiation in the range of frequencies which the segmented surface portion can transmit. However, *Walton* suggests the use of other shapes for making the slot of the antenna (col. 9/lines 41-42). *Ishikawa* teaches the use of a slot antenna (33) made up of lattice slots (32). It would have been obvious to one of ordinary skill in art at the time the invention was made to have substituted one known slot antenna with another since

both are simply antenna capable of electromagnetic radiation and the substitution would have yielded predictable results to one of ordinary skill in the art at the time the invention was made. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the antenna of *Ishikawa* with the antenna of *Walton* since the are the substitution would have yielded predictable results.

Claim 2: If the modifications to the invention of *Walton* were made, as discussed above, one with ordinary skill in the art would have realized the barrier lines within the segmented surface portion form a lattice raster with a constant raster unit size (fig. 4 of *Walton*).

Claims 4, 14 and 15: If the modifications to the invention of *Walton* were made, as discussed above, one with ordinary skill in the art would have realized the barrier lines within the segmented surface portion have at least partly a non-rectilinear form, wherein the non-rectilinear form is a zigzagged form. (fig. 4 of *Walton* illustrated the lines crossed).

Claims 13 and 20: If the modifications to the invention of *Walton* were made, as discussed above, one with ordinary skill in the art would have realized the segmented surface portion is surrounded on all sides by the electrically conductive coating (fig. 10 of *Walton*).

3. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Walton* in view of *Ishikawa* as applied to claim 1 above, and further in view of *Paulus et al.* (US 5,898,407, hereinafter *Paulus*).

Claims 9, 10 and 18: *Walton* in view of *Ishikawa* teach all of the limitations of claim 1, as discussed above. They fail to teach the coating incorporates a heatable area electrically isolated from an area of the coating adjacent to the segmented surface portion and provided with bus bars, wherein the heatable area is provided with lines influencing distribution of heating

current.. However, *Walton* teaches providing bus bars at opposite ends of the windshield to utilize the metal film as a defroster (col. 8/lines 10-17). *Paulus* teaches a slot antenna comprised of a metal coating, which incorporates a separate heating element comprising bus bars and additional heating elements (fig. 9, col. 9/lines 25-33). It would have been obvious to one of ordinary skill in art at the time the invention was made to have substituted one known heating element with another since both are simply heating elements capable of defrosting and the substitution would have yielded predictable results to one of ordinary skill in the art at the time the invention was made. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the heating element of *Paulus* with the heating means of *Walton*, since both are simply heating elements capable of defrosting and the substitution would have yielded predictable results to one of ordinary skill in the art.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Walton* in view of *Ishikawa* and *Paulus* as applied to claim 9 above, and further in view of *Murakami et al.* (US 5,307,076, hereinafter *Murakami*).

Claim 11: *Walton* in view of *Ishikawa* and *Paulus* teaches all of the limitations of claim 9, as discussed above. They fail to teach the heatable area is wired as an antenna for VHF and/or AM range. However, *Murakami* teaches the use of using the defroster as an AM antenna (col. 1/lines 57-61). Since it was well known to one having ordinary skill in the art at the time the invention was made to receive AM signals in automobiles, it would have be obvious to have utilized the heating elements of the combined invention of *Walton* in view of *Ishikawa* and *Paulus* as antennas, as taught by *Murakami*, in order to have received AM signals.

5. Claims 5, 12, 16 and 19 are considered a suggested use limitation and are not given any patentable weight. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

Response to Arguments

6. Applicant's arguments filed March 31, 2008 have been fully considered but they are not persuasive.

Applicant argues that “*Walton* teaches that the slot width must be sufficiently large enough such that the capacitive effects across it at frequencies of operation are negligible. In this manner, the signal is not shorted out. Introducing conductive elements within the area of the slot would therefore go against the disclosure of *Walton*”, see page 13, line 21 through page 14, line 2 of the Remarks. Examiner respectfully disagrees with Applicant. If one of ordinary skill in the art were to replace the lattice slot antenna 33 of *Ishikawa* with the conductive polygonal panel 106 of *Walton*, the slot surrounding the perimeter of the element will still be present, therefore, there would still be a slot width sufficiently large enough so as to not short out the signal.

Applicant also argues that “The “slot antenna” in *Ishikawa* is not a slot antenna in the same sense as *Walton*. In *Ishikawa*, the “slot antenna” 33 is merely a window through which a circularly polarized millimeter wave can be emitted from the slots 32”, see page 14, lines 21-23 of the Remarks. Examiner respectfully disagrees with Applicant. It is well known in the art that the radiating element of the invention of *Ishikawa* is the slot antenna 33. Col. 4, lines 52-56 of *Ishikawa* teaches “... a clockwise or counterclockwise circularly polarized wave is emitted from

the slots of the antenna 33", which clearly teaches slot antenna 33 is the emitter, i.e. radiator, and not "a window", as argued by the Applicant.

Applicant also argues that "Ishikawa's lattice portion does not function as a slot antenna in the same manner as Walton because there is no connection of a transmission line, such as a coaxial cable, to the borders of the slot to make the slot area itself emit or receive waves", see page 15, lines 2-4 of the Remarks. Firstly, Examiner believes that the slot antenna 33 is the emitter of *Ishikawa*, as described above. Secondly, it is well known in the art that an antenna radiator may be fed by a number of different types of feeding elements, such as, striplines and coaxial cables. Therefore, even though the feeding elements of *Ishikawa* and *Walton* are different, the slot antenna of *Ishikawa* will function equivalently to the slot antenna *Walton* if the feeding elements were replaced by any suitable feeding element which is well known in the art.

Applicant also argues that "The fact that the wave is received by striplines 30a, 30b, further supports the conclusion that the component 33 is merely a window for the wave(s) to pass through, and not an antenna", see page 15, lines 11-13 of the Remarks. Examiner respectfully disagrees with Applicant. Examiner notes that striplines 30a and 30b are not the radiators of the invention of *Ishikawa*, but are the feed lines to the slot antenna 33. Col. 4, lines 42-56 of *Ishikawa* teaches

The millimeter wave guided to the dielectric stripline 30a leaks and radiates because of the step S1. Then, the millimeter wave is deflected by the dielectric prism 34a in a direction perpendicular to the extending direction of the dielectric stripline 30a and enters the slot antenna 33 made in the conductive plate 6. In the meantime, the millimeter wave guided to the dielectric stripline 30b leaks and radiates because of the step S2. Then, the millimeter wave is deflected by the dielectric prism 34b in a direction perpendicular to the extending direction of the dielectric stripline 30b and enters the slot antenna 33. These millimeter waves are combined. Since these millimeter waves which enter the slot antenna 33 have a

mutual phase difference of 90 degrees, a clockwise or counterclockwise circularly polarized wave is emitted from the slots 32 of the antenna 33.

which clearly teaches striplines 30a and 30b functioning as feed lines which feed a signal to the slot antenna 33 where they are emitted from.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT KARACSONY whose telephone number is (571)270-1268. The examiner can normally be reached on M-F 7:30 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. K./
Examiner, Art Unit 2821

/Hoang V Nguyen/
Primary Examiner, Art Unit 2821